



## OPTIONAL INSTRUCTIONS

VHF TRANSCEIVER  
**IC-V82**  
UHF TRANSCEIVER  
**IC-U82**

<b>1 ANI FUNCTION</b> .....	1
■ General .....	1
■ Preparation .....	2
■ Operation .....	3
■ Related functions .....	5
<b>2 ANALOG VOICE SCRAMBLER</b> .....	7
■ Preparation .....	7
■ Operation .....	7
<b>3 DIGITAL VOICE SCRAMBLER</b> .....	8
■ Preparation .....	8
■ Operation .....	9

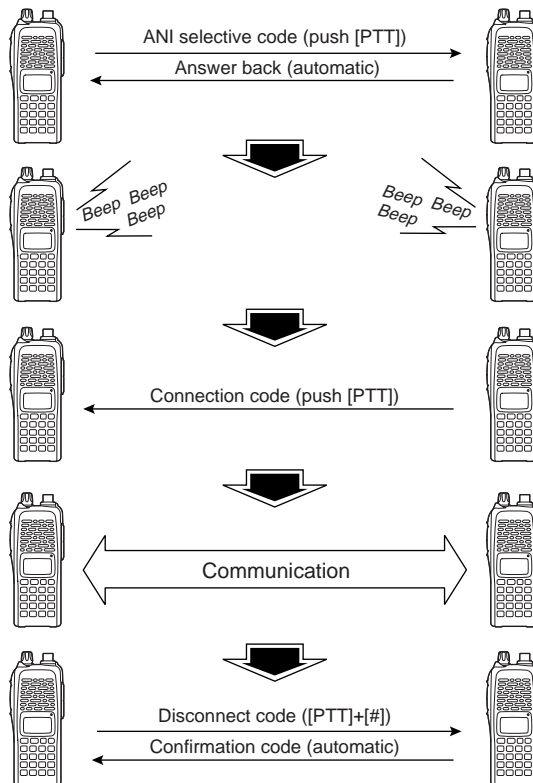
## ■ General

The ANI (Automatic Number Identification) function is a method of selective calling which features an answer back function. This allows you to confirm whether or not a call has reached the receiving party, even if the operator is temporarily away from the transceiver.

In order to use the ANI function, the following items and operation are necessary.

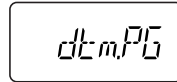
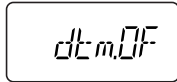
- UT-108 DTMF DECODER UNIT
- ANI code programming (via transceiver, or PC using the optional CS-V82 CLONING SOFTWARE)

Once ANI mode is selected, the transceiver cannot be used in frequency indication mode unless frequency indication mode is selected (INITIAL SET MODE or PC cloning), or the CPU is reset.



## ■ Preparation

- ① Push [**A•FUNC**] and [**0•OPT**] to enter OPTION SET MODE, then rotate [**VOL**] to turn Pager mode ON.
- “PG” appears.

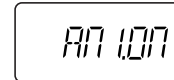


- ② Program your ID and the station codes.
- Set your ID into channel C0 and station codes into C1 to C6.
    - ➔ Push and hold [**0•OPT**] for 1 sec.
    - ➔ Rotate [**VOL**] (or push [**▲**]/[**▼**]) to select the code channel.
    - ➔ Enter the desired 3-digit ID code via the keypad.
    - ➔ Push [**\*•ENT↵**] (or [**D•CLR**]) to exit OPTION SET MODE.
- ③ Set the operating frequency, code channel and other conditions, such as tone squelch, tone frequency, etc., if desired.
- To select tone frequency or DTCS code, you must enter SET MODE.
    - ➔ Push [**A•FUNC**] and [**8•SET**].
    - ➔ Push [**▲**] or [**▼**] several times to select the desired item.
    - ➔ Rotate [**VOL**] to select a tone frequency or DTCS code and polarity.
    - ➔ Push [**\*•ENT↵**] (or [**D•CLR**]) to return to the previous indication.
- ④ Push [**A•FUNC**] and [**C•MR**] momentarily, then push [**▲**]/[**▼**] to select the desired memory channel.
- ⑤ After pushing [**A•FUNC**], push and hold [**C•MR**] for 1 sec. to program the contents into the selected memory channel.
- Memory bank can also be selected, if desired.

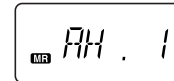
- ⑥ Repeat steps ③ and ⑤ to program other channels.
- ⑦ Select channel number indication mode.
- ➔ Turn the power OFF.
  - ➔ While pushing [**▲**] and [**▼**], turn the power ON.
  - ➔ Push [**▲**] or [**▼**] several times until “dSP” appears.
  - ➔ Rotate [**VOL**] to select “dSP.CH.”



- ⑧ Turn the ANI mode ON.
- ➔ Push [**▲**] or [**▼**] several times until “AnI” appears.
  - ➔ Rotate [**VOL**] to select “AnI.On.”



- ⑨ Push [**\*•ENT↵**] (or [**D•CLR**]) to exit INITIAL SET MODE.
- ANI mode is selected—“AH” is displayed instead of “CH.”



# 1 ANI FUNCTION

## ■ Operation

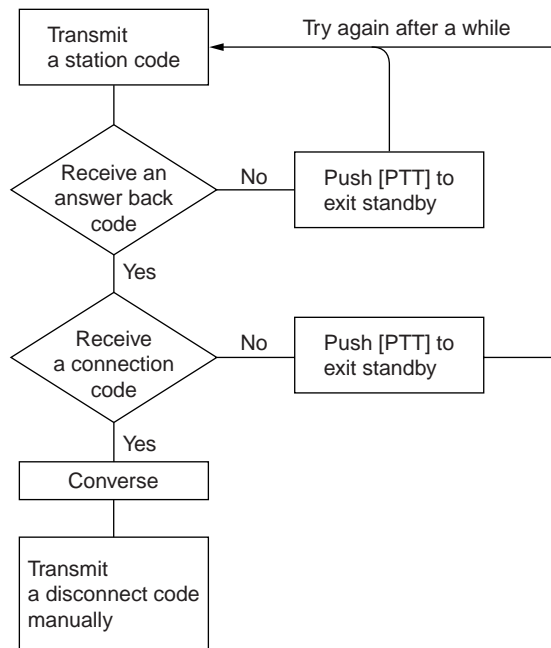
### ◇ Calling a specific station

- ① Turn the power ON.
- ② Push **[▲]** or **[▼]** to select the desired channel.
  - “AH” is displayed instead of “CH” on the ANI set channel.
- ③ Push **[PTT]** to connect to the selected station.
  - Transmits the pre-programmed station code.
- ④ When the transceiver rings (an automatic answer back is received), wait for a connection code from the connected station; when the transceiver doesn't ring, push **[PTT]** again to exit the waiting condition (transceiver transmits a disconnect code automatically), then try again from step ② after waiting for a while.
- ⑤ When the connection code is received, the connection code sounds, then “**㊦**” blinks; when the connection code is not received within 10 sec., push **[PTT]** again (transceiver transmits a disconnect code automatically). Try again from step ② after waiting for a while.
- ⑥ When “**㊦**” blinks, you can converse with the connected station.
  - Push **[PTT]** to transmit; release to receive.
- ⑦ When your conversation is finished, push **[#BANK]** while pushing **[PTT]** to transmit a disconnect code.


### NOTE:

When your conversation extends into the time-out time, the transceiver transmits a disconnect code automatically.

### • ANI operation flow chart



### ◇ Calling group stations

- ① Select the desired ANI set channel.
- ② Push [**\*ENT**] then enter the 3-digit group code. [**D•CLR**] must be included at least once for the group code.
  - Transmits automatically after the 3rd digit code is entered.
  - When making group calls, the transceiver does not ring and no answer back connection code is received.
  - You can make an announcement to your group immediately without a connection procedure.
  - “” blinks.
- ③ Operate the transceiver in the normal way (push [**PTT**] to transmit; release [**PTT**] to receive).
- ④ When your conversation is finished, push [**#•BANK**] while pushing [**PTT**] to transmit a disconnect code.

### ◇ Group code examples

**[Example 1]:** If the “11D” is transmitted, the transceivers with ID codes “110” to “119” are called.

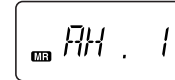
**[Example 2]:** If the “1D3” is transmitted, the transceivers with ID codes “103,” “113,”...“183” and “193” are called.

**NOTE:**

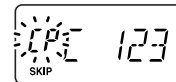
When “DDD” code is transmitted, all transceivers are called.

### ◇ Waiting for a call

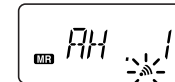
- ① Select the desired ANI set channel, or push [**A•FUNC**] and [**5•SCAN**] to start scanning.





- ② When receiving a selective call, the display changes as below, and ringing beeps are heard.



When called from the station “123.”



During ANI conversation.

- ③ Push [**PTT**] to send a connection code within 10 sec.
  - A disconnect code is sent automatically instead of a connection code in case [**PTT**] operation is not performed within 10 sec.
- ④ While “” blinks, converse with the connected station.
  - Transmitting the disconnect code from your side (push [**#•BANK**] while pushing [**PTT**]) is also available. (except for group call receive)
  - “” stops blinking.

# 1 ANI FUNCTION

## ■ Related functions

The following functions for the ANI operation are added to INITIAL SET MODE when the optional UT-108 DTMF DECODER UNIT is installed.

### Initial set mode programming

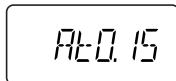
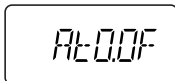
- ① While pushing [▲] and [▼], turn the power ON.
- ② Push [▲] or [▼] several times to select the desired item.
- ③ Rotate [VOL] to set the condition or value.
  - Push [\*ENT] (or [DCLR]) to exit INITIAL SET MODE.

### ◇ Time-out timer

To prevent accidental prolonged transmission, etc., particularly in ANI operation. This function transmits a disconnect code just before it cuts a transmission OFF after 0.5–15 min. (0.5 min. steps) of continuous transmission automatically.

AtO.OFF : The time-out timer is turned OFF. (default)

AtO.0.5–15 : The transmission is cut OFF after the set period elapses.



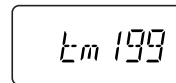
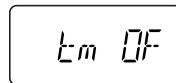
### ◇ Transmit channel

Select the transmit channel during scan from 0–199, 1A–3B and OFF.

tm 0–199, 1A–3B

: Pauses scan and transmits the programmed code on the selected channel. 2 sec. after a disconnect code is transmitted or received, scan resumes.

tm OF : Searches clear channels automatically. After scanning stops once, the transceiver transmits on a clear channel.



**NOTE:** When specifying a transmit channel, turn the scan skip setting OFF for the channel. When the channel is set as a skip channel, transmission is inhibited.

### ✓ RECOMMENDATION!

When the scanning function is used with the ANI operation, selecting up to 7 channels only for scanning is recommended. Scanning of more than 8 channels may cause the ANI code not to be detected correctly.

When using the memory bank scan, select a transmit channel from the scanning bank. Otherwise the scan resumes in another bank— not in the previously scanned bank.

**◇ Lock out function**

Turns the busy channel lock out function ON and OFF.

AnC.ON : Transmission is inhibited when the channel is busy.

AnC.OF : Transmission is permitted even when the channel is busy.

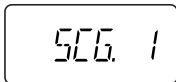
A rounded rectangular box containing the text "AnC.OF" in a stylized, italicized font.A rounded rectangular box containing the text "AnC.OF" in a stylized, italicized font.

## ■ Preparation

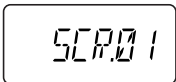
The analog voice scrambler function used for FM mode operation. The analog voice scrambler function is required installing an optional voice scrambler unit UT-109 (non-rolling type) or UT-110 (rolling type). Ask your dealer for details.

### ◇ Scrambler setting

- ① Push [**A•FUNC**] and [**0•OPT**] to enter OPTION SET MODE, then push [**▲**] or [**▼**] several times until “SCG” appears.




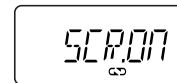
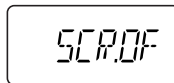
- ② Rotate [**VOL**] to select the desired group code from 1–4.  
 • The same group code must be selected in your group.  
 • Selectable group code is “1” only when UT-109 is installed.
- ③ Push [**▲**] once, “SCR” appears.
- ④ Rotate [**VOL**] to select the desired scramble code.  
 • Select a scramble code from 01–FF (255 codes; hexadecimal digit).



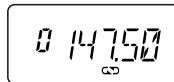
- ⑤ Push [**\*•ENT•0**] (or [**D•CLR**]) to exit OPTION SET MODE.

## ■ Operation

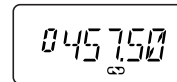
- ① Set the desired operating frequency.  
 • Set other conditions, such as repeater, tone squelch, etc.
- ② Push [**A•FUNC**] and [**0•OPT**] to enter OPTION SET MODE, then push [**▲**] or [**▼**] several times until “SCR” appears, then rotate [**VOL**] to turn the voice scrambler function ON.  
 • “” appears.




- ③ Push [**\*•ENT•0**] (or [**D•CLR**]) to exit OPTION SET MODE.



IC-V82's indication



IC-U82's indication

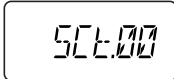
- ④ Operate the transceiver in the normal way (push [**PTT**] to transmit; release [**PTT**] to receive).
- ⑤ To turn the voice scrambler function OFF, repeat above procedure as step ②.  
 • “” disappears.

## ■ Preparation

The digital voice scrambler function is used for the **voice** operation only (not for the **low speed data** operation). In order to use the digital voice scrambler function it is required to install an optional digital unit (digital modulator/demodulator) UT-114. The digital voice scrambler function uses and combines 4 kinds of selectable codes “SCt (type),” “SCG (group),” “SCK (key),” “SCR (code)” in OPTION SET MODE.

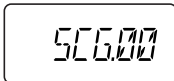
### ◇ Scrambler setting

- ① Push [**A•FUNC**] and [**0•OPT**] to enter OPTION SET MODE, then push [**▲**] or [**▼**] several times until “SCt” appears.
  - “SCt” appears.
- ② Rotate [**VOL**] to select the desired scrambler (type) code.
  - Select a scramble (type) code from 00–FF (256 codes).



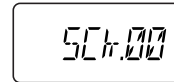
SCt.00

- ③ Push [**▲**] once, then rotate [**VOL**] to select the desired scrambler (group) code.
  - “SCG” appears.
  - Select a scramble (group) code from 00–FF (256 codes).



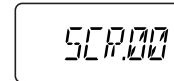
SCG.00

- ④ Push [**▲**] once, then rotate [**VOL**] to select the desired scrambler (key) code.
  - “SCK” appears.
  - Select a scramble (key) code from 00–FF (256 codes).



SCK.00

- ⑤ Push [**▲**] once, then rotate [**VOL**] to select the desired scrambler code.
  - “SCR” appears.
  - Select a scramble code from 00–FF (256 codes).



SCR.00

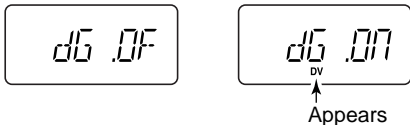
- ⑥ Push [**\*•ENT**] (or [**D•CLR**]) to exit OPTION SET MODE.

**NOTE:** When operating the digital voice scrambler function, set (at least) one item of “SCt,” “SCG,” “SCK” or “SCR” other than “00” (default), otherwise the digital voice scrambler function does not work. Also same group members must set each item to same code respectively. If you set even one code differently within your group, you cannot communicate with your group members at all.

### 3 DIGITAL VOICE SCRAMBLER

## ■ Operation

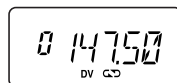
- ① Set the desired operating frequency.
  - Set other conditions, such as repeater, tone squelch, etc.
- ② Push [**A•FUNC**] and [**0•OPT**] to enter OPTION SET MODE, then push [**▲**] or [**▼**] several times to select the digital select mode.
  - “DG” appears.
  - Rotate [**VOL**] to turn the digital mode ON.



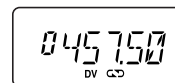
- ③ Push [**▲**] (or [**▼**]) several times to select the digital voice scrambler function.
  - “SCR” appears.
  - Rotate [**VOL**] to turn the digital voice scrambler ON.
  - “GD” appears.



- ④ Push [**\*•ENT•0**] (or [**D•CLR**]) to exit OPTION SET MODE.



IC-V82's indication



IC-U82's indication

- ⑤ Operate the transceiver in the normal way (push [**PTT**] to transmit; release [**PTT**] to receive).
- ⑥ To turn the voice scrambler function OFF, repeat left procedure as step ③ while entering OPTION SET MODE.
  - “GD” disappears.



**Count on us!**

A-6413D-2EX-①  
Printed in Japan  
© 2004 Icom Inc.

**Icom Inc.**  
1-1-32 Kamiminami, Hirano-ku, Osaka 547-0003, Japan